



Transforming your supply chain capabilities with smart DC design & automation

The Chartered Institute of Logistics and Transport (CILT)

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TMX



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01

Introduction

Introducing our Team today



Matthew Unali
Consultant Supply Chain



Nick de Klerk
Senior Consultant



Rob Turner
Director Supply Chain



Caleb Nicolson
Director Supply Chain
and General Manager NZ



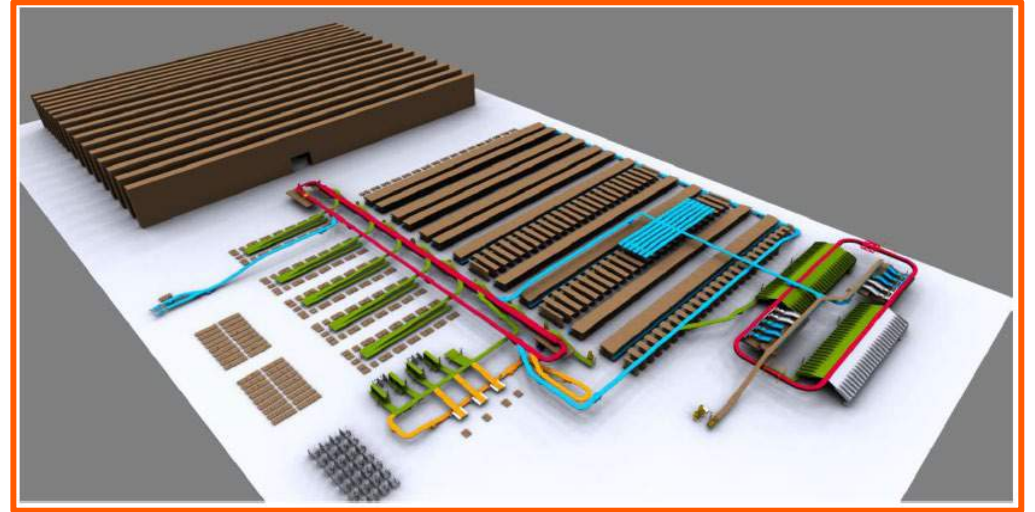
02

**Kathmandu –
The Automation Adventure**

Kathmandu – The Automation Adventure

From concept to reality.....

- What did we deliver?
- Why
- How did it transform Kathmandu's Supply Chain Capabilities?
 - People / Labour
 - Service levels
 - Stock and retail perspective
- Key Learnings

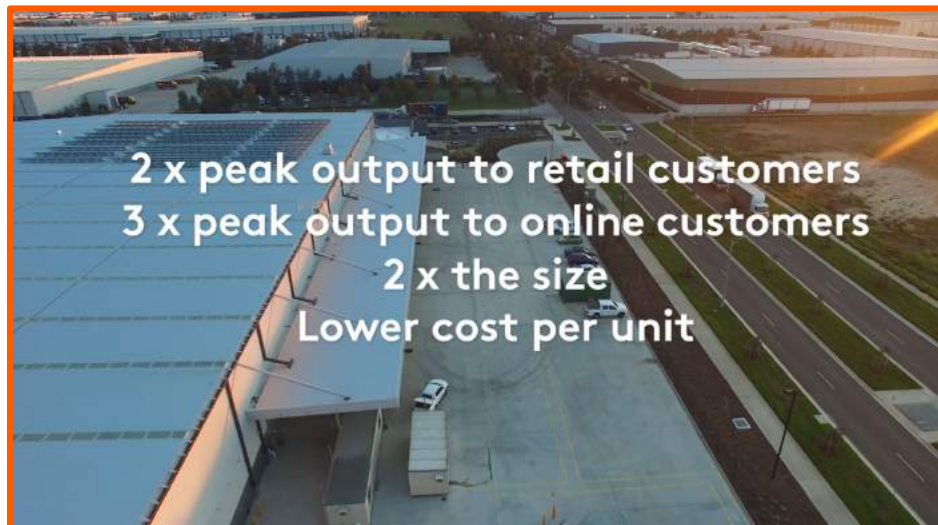


Kathmandu – The Automation Adventure

Why.. What was driving change.....



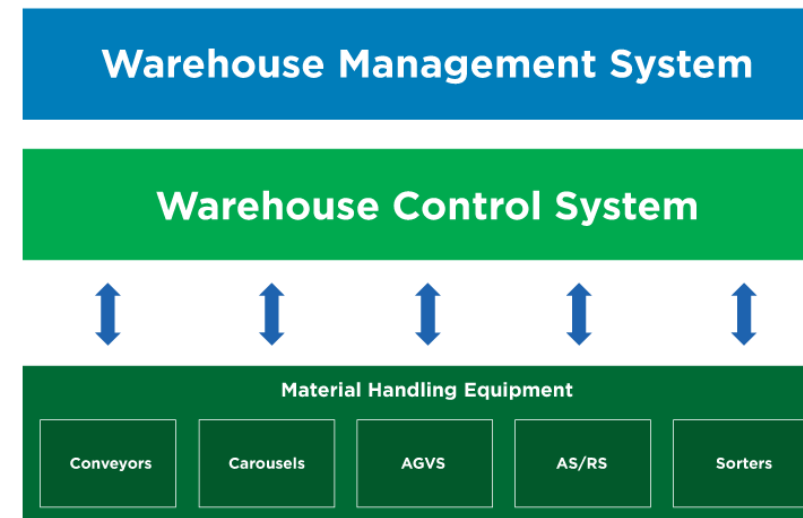
What did we deliver?



Transforming Kathmandu's Supply Chain Capabilities

People / Labour

- The # 1 cost saving was “batch picking”
 - 110 stores in 3 pick paths
 - Included all online picks
- Operator hours reduced however our support required increased
 - Systems Manager
 - Sorter Supervisor
 - Reject line operators



Transforming Kathmandu's Supply Chain Capabilities

Service Levels

- Cost savings are great, More Sales at 60%+ margin is fantastic!
- Peak operational capacities had increased
- We took a calculated bet on “responsiveness”



Transforming Kathmandu's Supply Chain Capabilities

Stock and Retail



Kathmandu – The Automation Adventure

Key Learnings.

- Engage your team in the change early, identify or import key talent
- IT is your best mate
- Data cleansing, Barcodes, Supplier Manuals
- Test, test, test
- Its more than Supply Chain, engage the wider business early in the transformation narrative
- Be calculated, Be brave!





02

**Automation options and
industry insights**

Why distribution centre automation?

Three expenses that are expected to increase over the next 5–15 years:

1. Land Costs



2. Energy Costs



3. Labour Costs



All manual facilities can and should be designed with a flight path to automation in the future.

Other Considerations:



Increased throughput capability



Warehouse & resource utilization



Meeting service level agreements



Reduced operating costs



Optimised warehouse space



Minimise human errors & reliance



Improved warehouse safety



Data visibility & accuracy

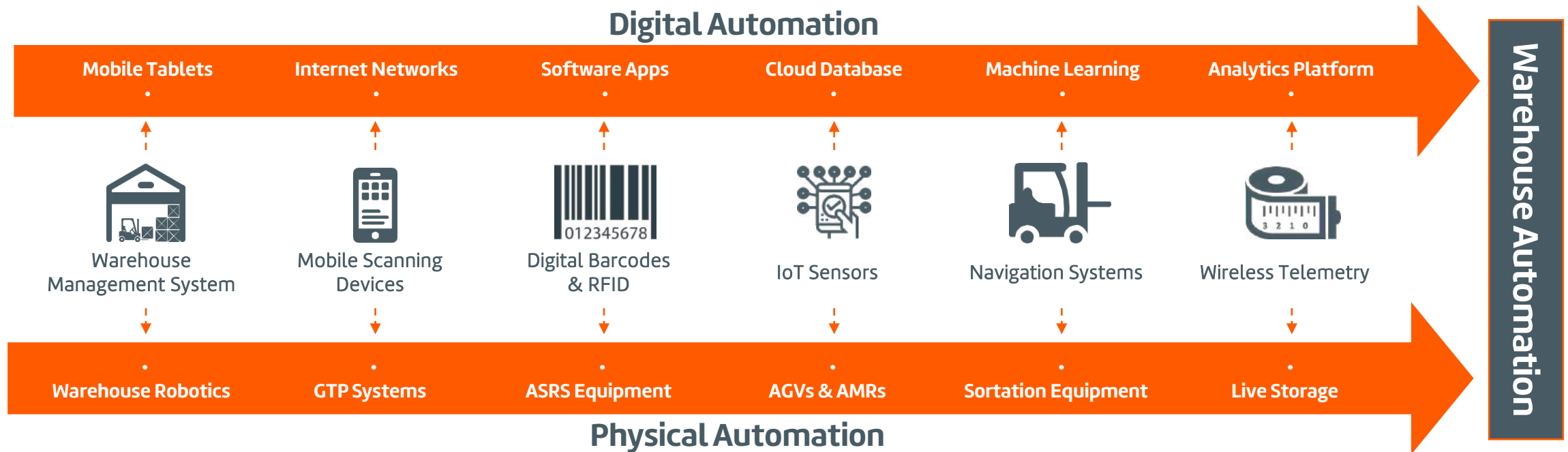


Inventory accuracy & availability

What is distribution centre automation?

The process of automating inventory movement within a distribution centre. There are two types of automation:

- 1 **Digital process automation** – using software or data to simplify or streamline manual workflows
- 2 **Physical process automation** – using technology minimise manual effort and operational inefficiency



Which is the right automation system for me?

When selecting and designing the appropriate automation center for a facility, there are 4 main questions that must be answered:



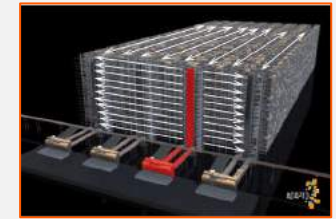
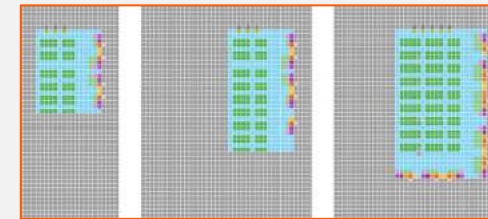
1. What am I handling?



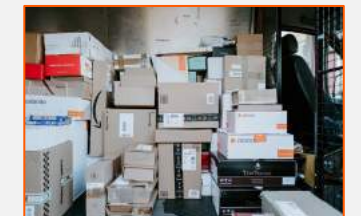
2. How fast does it need to be?



3. How big does it need to be?


















4. What is the order profile?



How do we know what is right for the operations?



Examples of automating a process

Task	Manual	Low Automation	Medium Automation	High Automation
 Unloading product				
 Storing product				
 Picking product				

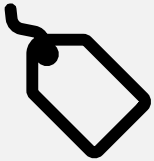
What is happening in the market?



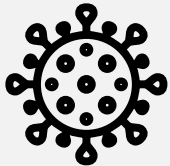
The automation market is becoming **increasingly fragmented**, with multiple new vendors entering the market, often with a niche offering. This is resulting in **increased integration** between suppliers for a solution.



The automation **spectrum is broadening** with low cost automation options entering the market, lowering the barrier to entry. More advanced technology with AI is allowing for automation of tasks previously deemed too complex to be automated



Automations **commercial viability** is increasing with different pricing options being offered. The complexity of technology is also being simplified for **easy and scalable deployment**.



To keep up with end-customer demands, new models with improved Service Level Agreements (SLA's) are being explored, which has been heavily accelerated by COVID 19.



What is happening in the market?

AI driving robotic piece picking technology, increasing the pick rates and SKU range



What is happening in the market?

Mobile automation usage is increasing with lower costs and increased flexibility





03

Case Studies

Nolan Meats – Automated Cold Store

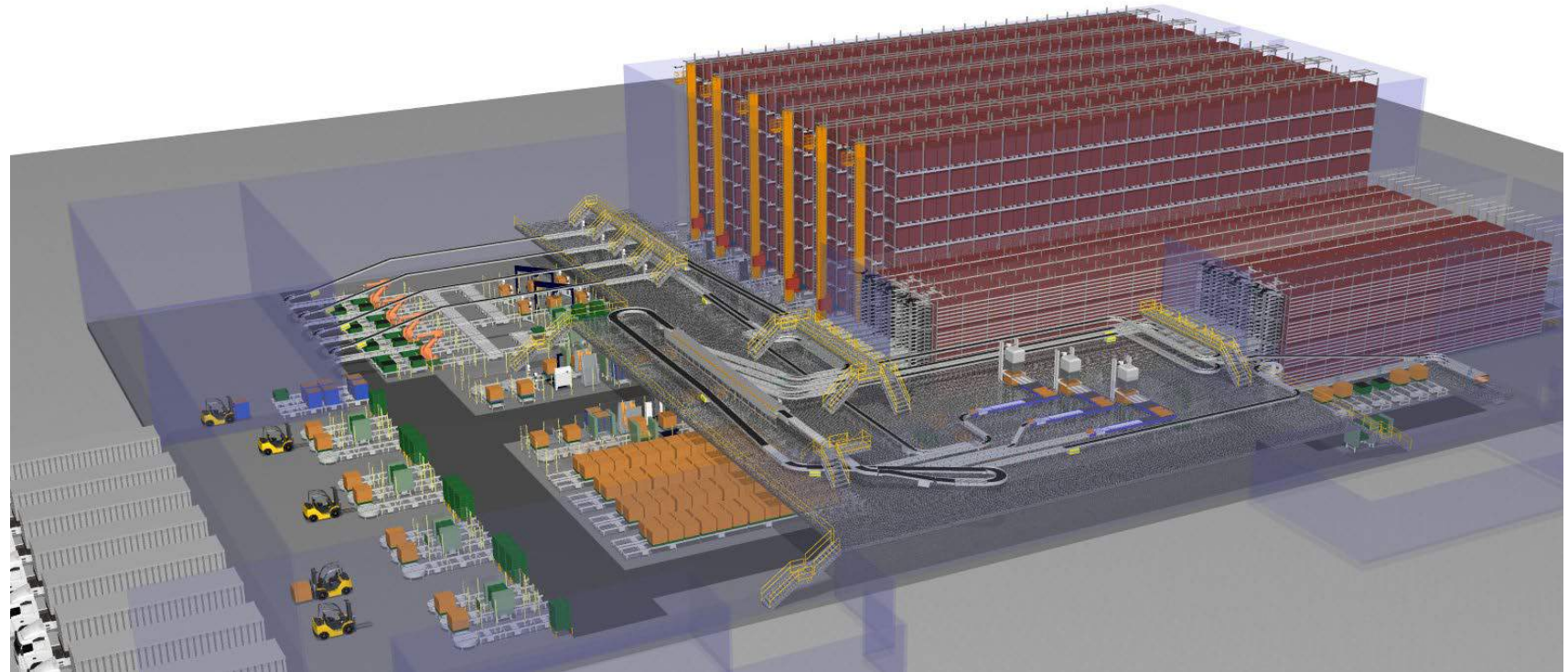
Southern hemisphere's largest fully automated cold storage plant in Gympie

- Automated freezing using Milmeq plate freezer
- Automated buffer & sequence using Dematic Multishuttle
- Automated palletising using PFI robotic arm



Tey's Brisbane – Automated Cold Store

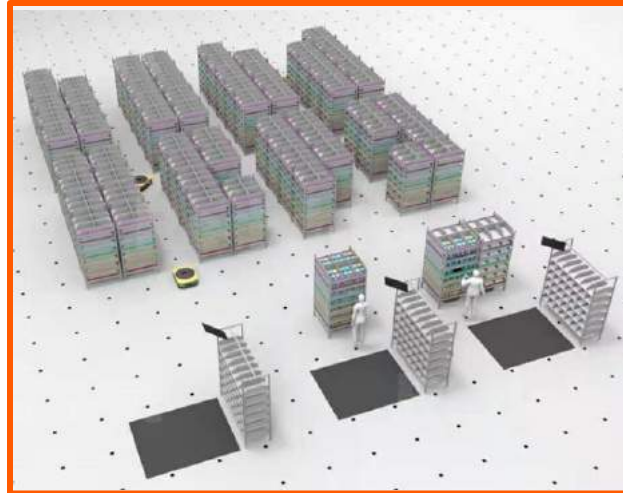
- Port of Brisbane
- 12,000m² DC
- Daily throughput: 48,500 ctns
- PLT ASRS Storage:
 - 2,162 Chilled
 - 4,324 Frozen
- CMS Storage:
 - 29,192 Chilled
 - 14,771 Frozen



Startrack – Autonomous Mobile Robot Goods-To-Person

Relocating a complete AMR system in 6 days

- Site preparation completed over 3 days, prior to system shut down at Tullamarine
- AMRs, PODs and workstations packaged and made ready for transport upon completion of order picking on Wednesday 17th February
- IT and AMRs went live on Thursday 18th February
- PODs are inducted into new map area on Friday 19th February
- Live order testing on Saturday 20th February
- Resumed normal order fulfilment operation on Monday 22nd February, with all orders picked and dispatched by end of Monday



Questions & Discussion.....



Matthew Unali
Consultant Supply Chain



Nick de Klerk
Senior Consultant



Dion Vuletich
Supply Chain Consultant



Caleb Nicolson
Director Supply Chain
and General Manager NZ

Thank you

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